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ABSTRACT

A study was conducted to explore the possibility of career education's impact upon a broad range of basic skills, including skill areas where standardized test scores are usually not available. Information was obtained through structured interviews with nineteen elementary (grades 1-5) teachers in seven schools in Rockford, Illinois, who were selected based upon their principals' rating of the extent to which they integrated career education concepts and activities into their classroom teaching. Results of the Career Education Activities Survey used in the study outlined the types and frequencies of activities occurring in the interviewees' classrooms, but did not consistently distinguish between the high and low involvement groups based upon principals' ratings. The study yielded a positive response to the question posed in its title by providing evidence that career education can have an observable impact on other basic skills as well as on reading and mathematics. The number of students who showed improvements in the language arts skills areas of writing, speaking, and listening is impressive. These are important skills which are not measured by the standardized achievement tests used in many previous studies, but which are clearly worthy of further investigation under more controlled conditions. Integration of career education into the curriculum has had a particularly beneficial effect in Rockford upon a number of slower learners and minority students. (TA)

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Career Education and Basic Skills: Should We Broaden Our Investigation?

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Career Education and Basic Skills: Should We Broaden Our Investigation?

In a 1975 policy paper, the Office of Career Education outlined nine specific learner outcome goals for career education. The first of these nine goals was concerned with basic skills and was presented as follows:

> For purposes of forming a broad basis for evaluating the effectiveness of career education efforts, a listing of developmental outcome goals is essential. In this sense, career education seeks to produce individuals who, when they leave school (at any age or at any level), are: (1) Competent in the basic academic skills required for adaptability in our rapidly changing society.[5]

With an increasing educational emphasis on "back to the basics," and competence in basic skills now an important pre-requisite for success in the world of work, this career education goal has received considerable attention in recent evaluation efforts around the nation. Advocates of career education have been earnestly searching for evidence to support their claim that career education is not competing with the "back to the basics" movement, but is a vehicle which educators can use to actually increase basic acadmic skills achievement among their students.

Bhaerman (1977) and Bonnet (1977) have written analytical summaries of the results of many of the evaluations conducted on this topic in recent years. Bhaerman's conclusion, based upon analyses of 38 studies, was that "academic achievement generally was impacted positively or, when it was not, it (career education)did not interfere with that goal. In a word (two actually), I believe that the studies can be interpreted with guared optimis m."[1] Bonnet reviewed evidence from 45 career education programs and concluded that "overall results are neither positive nor negative, but in selected instances improvements were both statistically and educationally significant."[2] Thus, it appears that the question

of whether or not career education can serve as a vehicle for increasing basic skills achievement has not been fully answered.

The many studies cited by Bhaerman and Bonnet reported statistical analyses of acheivement scores on standardized reading and mathematics tests. A fundamental grounding in reading and mathematics is indeed a very important ingredient to success in the world of work. But competence in other basic skills such as listening, speaking, and writing is also desirable, if not a pre-requisite, for success in many career areas and post-secondary educational programs. Unfortunately, the impact of career education upon achievement in these "other" skill areas has gone largely unstudied because commonly administered achievement tests only provide scores in reading and mathematics.

The principal objective of this study was to explore the possibility of career education's impact upon a broad range of basic skills, including skill areas where standardized test scores are usually not available. The study was part of a third party evaluation of a federally funded career education project in Rockford, Illinois.

Method and Data Source

Information was obtained through structured interviews with 19 elementary (grades 1-5) teachers in seven schools in Rockford, Illinois which had served as pilot sites for a career education implementation project. Teachers were selected based upon a rating of the extent to which they integrated career education concepts and activities into their classroom teaching. Each teacher was rated by his or her principal on a 1 (no integration) to 5 (high integration) scale. The eleven teachers who received high (5) ratings were selected for interviews; most had been formally involved in career education workshops in previous years. Eleven additional teachers were randomly selected from sixteen teachers who received a rating of 2, indicating minimal involvement in career education.

Questions developed for the interviews were based upon general curriculum and basic skills objectives for elementary grades (Flanagan, Mager, and Shanner, 1971a, 1971b). Questions on listening, speaking, reading and writing covered skills in the language arts. Questions on arithmetic operations, problem solving, and measurement covered skills in mathematics. General study skills were examined in several concluding questions.

Two staff members from the Wisconsin Vocational Studies Center conducted the interviews during a two day period in mid-May, 1976. Teachers were randomly assigned to the interviewers. Of the original 22 teachers selected, three in the low rated group were not interviewed due to illness or last minute schedule conflicts. The 19 interviews took approximately 40 minutes each, with exact length dependent upon the nature of each teacher's responses. During a brief introduction, each teacher was briefly told that the purpose of the interview was to examine the possible impact of career education upon student achievement in basic skills. Then, each was asked to complete a short Career Education Activities Survey which was later used to confirm principals' ratings of teachers' involvement in career education. Prior to the first basic skills question, teachers were informed that the interviews would be taped for review by the Center staff. It was stressed that the specific sources of all information would remain confidential.

In the verbal instructions, teachers were told that the series of questions could be answered with either a "Yes" or "No." They were asked to answer "No" if they did not observe any student change which they felt was a result of the integration of career education concepts and activities into their classroom teaching. If a teacher did observe student improvement which he or she felt could be attributed to career education, a "Yes" response was to be given. To support "Yes" answers, teachers were asked to give short examples of specific students, including details on the nature of their change, the kind of career education activities

which produced the change, whether the improvement was a lasting one, and the degree of confidence they had in attributing the change to career education.

The interviewers and two additional Center staff members independently listened to 18 taped interviews. Because of mechanical difficulty, one interview was not recorded and consequently was not included in the review. Judges identified "Yes" answers which were supported with good examples meeting four criteria: 1) observations of specific behavioral changes were made; 2) the improvement had to be of an enduring or permanent nature; 3) specific kinds of activities to which the change could be attributed were identified; and 4) the teacher was fairly confident in attributing the change to career education, at least in part, rather than to any of a number of other education forces.

Good examples were labeled as either "specific" if, in the judgment of all four judges, the above criteria were met in the citation of a particular child, or "general" if the improvement was noticed in three or more students but no single child was discussed in significant detail.

Results

The results of the Career Education Activities Survey outlined the types and frequencies of activities occurring in the interviewees' classrooms, but did not consistently distinguish between the high and low involvement groups based upon principals' ratings. Low involvement teachers reported more frequent use of traditional teaching methods and resources such as films, slides, records, tapes, and class discussions on careers than did highly involved teachers. However, teachers rated as being highly involved reported that they made greater use of more dynamic instructional methods and resources such as visits by parents and other outside speakers, field trips, hands on experiences, and writing about jobs and people at work.

Of the 81 good examples of student improvement in basic skills meeting the review criteria, 59 (73%) were provided by teachers who have integrated career education with the regular curriculum to a high degree. Thirteen of the 22 examples provided by the minimally involved teachers were given by one teacher who, contrary to her principal's rating, was quite active in career education. The results are offered not as conclusive evidence of career education's impact upon basic skills achievement, but rather as important information of use in planning further, more controlled investigations into the subject.

Career education's most visible impact was upon the language arts skills of reading, writing, speaking and, to a slightly lesser degree, listening. Teachers reported improvement in form, content, organization, and clarity of written material as a result of writing invitations and thank you notes to speakers, descriptions of field trips, and reports on occupations. Most teachers who provided good examples agreed that greatest improvement occurred in poor or remedial students because career education writing activities helped them gain confidence in their ability to express ideas in writing and communicate with others.

Career education also was found to have an observable impact upon the reading habits of many students. A majority of the highly rated teachers provided general evidence of greater interest and enjoyment in reading among several students. A number of poorer students in particular began to do more reading on their own after speakers' presentations and field trips focusing on occupations. Six teachers cited good examples of change in the type of material some students were reading; the tendency was toward more reading of factual and career oriented literature and less reading of fiction. In some instances, children were reading materials on careers which were more difficult than materials they had normally attempted. Several teachers noted general and specific examples of growth in vocabulary; in

the words of one teacher, "Career ed. played an important part in the building of vocabulary by introducing students to many new words from the world of work which, in its absence, are introduced at a later age."

Over half the highly involved teachers observed improved confidence and performance in speaking among some students. A number of rather shy, inhibited children began to "open up" in the classroom as a result of question and answer periods with speakers who stimulated their interests. Six examples of improved listening skills were shared, and four of these were of specific students who had previously been generally inattentive in school. They learned to listen more carefully primarily as a result of speaker interviews which stressed courtesy, not repeating questions asked by others, and not asking questions for which the speaker had already given answers. Observations by four teachers of better recall of specific information from oral presentations may be indirect evidence of improved listening skills.

Only a few student improvements in mathematics were attributed to career education. Career education's very limited impact upon basic skills in mathematics is probably the result of several factors. A principle reason may be the very limited degree to which career education has been integrated with mathematics in Rockford because of the relative difficulty of this task. Career education's potential for impact upon math achievement was seen in two classes where units on graphs and measurement were related to occupations in a very successful manner which stirred the interest of many students.

Educational Importance of the Study

Career education's impact upon basic skills achievement has been documented in many recent studies (Bhaerman, 1977; Bonnet, 1977) through statistical analyses of reading and mathematics scores on standardized achievement tests. This study yielded a postive response to the question posed in its title by providing evidence

that career education can have an observable impact on other basic skills as well. Certainly the number of students who showed improvements in the language arts skills areas of writing, speaking, and listening is impressive. These are important skills which are not measured by the standarized achievement tests used in many previous studies, but which are clearly worthy of further investigation under more controlled conditions. Amount of growth in these skills and the number of children positively affected by career education are, of course, impossible to determine from these exploratory interviews. Teachers had a rather limited amount of time to make fairly specific observations and tended to relate dramatic cases of improvement in response to the interviewers. Many other students may be making similar gains which may be less noticeable, but no less important.

The integration of career education into the curriculum has had a particularly beneficial effect in Rockford upon a number of slower learners and minority students. Career education activities have shown these students the relevance of their studies to later life and the importance of gaining competence in basic language and math skills. Thus, career education has functioned as a motivating force for these students to learn and strive for competence. Career education's impact upon basic skills achievement in these special populations is also worthy of further investigation.

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